EXHIBIT 11

February 22, 1985

TO: Mr. J.M.E. Mixter

FROM: B.J. Mickelson

SUBJECT: Methyl Tertiary Butyl Ether (MTBE)

Your memo of February 7, 1985 indicated that the addition of 7-11% MTBE to Exxon mogas in the Texas pipeline system is being considered beginning in the second quarter of 1985. As you requested we have reviewed the environmental risks from retail service station underground storage systems associated with the addition of MTBE.

The addition of MTBE to EUSA motor gasolines is of concern primarily because MTBE has a much higher aqeuous solubility (25,000 mg/l) than other soluble gasoline compounds, such as Benzene (1,780 mg/l). This can be a factor in instances where underground storage tanks develop a leak which ultimately may find its way to the underground aquifer. When these compounds dissolve in ground water and migrate through the soil matrix they separate into distinct plumes. MTBE creates the most mobile of the common gasoline plumes. MTBE is not a known carcinogen like Benzene however we can be required by public health agencies to remove it based on its taste and odor characteristics. Exxon has been involved in several ground water contamination and clean up incidents in the Eastern U.S. where the more rapid differential transport of MTBE and IPE (Isopropyl Ether) has been clearly observed. However, in the Texas Pipeline system we have experienced no known drinking water contamination incidents. This favorable incident record is a result of geohydrologic factors such as depth to potable aquifers, overlying confining layers and cultural factors, such as public utility districts supplying drinking water limiting the wells which could be impacted by a spill.

Offsetting the negative factors above, MTBE could be considered both an early indicator of contamination and as a method to predict the fate of the slower moving, toxic constituents, offsetting some of the adverse effects of its inclusion in our gasoline.

We see no overriding reason to recommend against the use of MTBE in the Texas Pipeline system. However the decision to utilize MTBE in this system should also consider in the base case economics the capital and expense associated with a program to increase monitoring at affected retail service stations. A detailed study would be required to determine which stores should be monitored. Conservatively we could install monitoring systems at all the O/L stations in the Texas Pipeline served area for a one time expenditure of aproximately $1,820K and a yearly monitoring cost of aproximately $1,092K.

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Similar monitoring is currently required in California, some portions of Florida, and Austin, Texas. The 1984 RCRA amendments require the EPA to promulgate some type of monitoring requirement for all underground storage tanks by 1987. These costs are conservative and encompass the entire area served by the Texas Pipeline.

Should the decision be made to add MTBE a detailed risk assessment will be conducted to establish the locations where the additional monitoring should be initiated.

If you need anything further please advise.

c: A.L. Decker
R.R. Eaton
BJM:jm
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BJ Nickelson